MITS-00417

MITSUBISHI

FARBFERNSEHGERÄT
TELEVISEUR COULEUR
KLEURENTELEVISIE
COLOUR TELEVISION

CT-33B3EST

BEDIENUNGSANLEITUNG
GEBRUIKSAANWIJZING
MODE D'EMPLOI
OPERATING INSTRUCTIONS

MITSUBISHI

COLOUR TELEVISION

MODEL

CT-33B3EST

OPERATING INSTRUCTIONS

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1 GENERAL INFORMATION

Please read these instructions before operating the set. This model may have controls and features unfamiliar to you.

AUTOMATIC SWITCH-OFF

This model will automatically switch off (go to stand-by) about 30 minutes after the end of programme transmissions.

FOR YOUR SAFETY

- Never remove the back cover - there are very high voltages inside which could kill!
- There are ventilation slots in the back and bottom of this TV - do not block these holes. Do not position the TV too close to curtains (less than 10cm) or cover it with anything.
- Never poke anything into the ventilation slots.
- Avoid using the set in very warm or damp places - never use it in a bathroom, for example!

CLEANING

Switch off and unplug the TV from the mains before cleaning.

The cabinet should be wiped with a clean, soft, dry cloth.

The picture tube should be wiped with a soft cloth dampened with a solution of mild detergent such as dish washing liquid. Dry completely with a soft, dry cloth.

Do not use solvents, abrasive cleaners or other strong cleaning agents.

MAINS SUPPLY

This TV should be connected to a mains supply of 230 Volts, 50 Hz AC only.

AERIAL

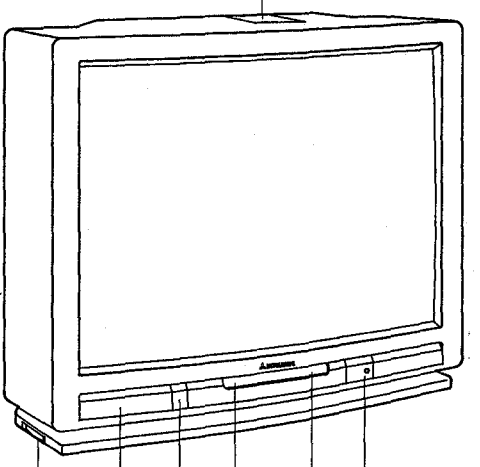
For the best reception you should use an aerial suitable for your area and reception conditions - your dealer can advise you about this. A set-top aerial may not give good results but can be useful in good reception areas. Connect your aerial to the socket marked ⅂⊢ on the back of the set.

CAUTION

Do not put your fingers between the TV and its pedestal base while you are carrying it or it is turning - you may trap and hurt your fingers.

2 DESCRIPTION OF THE TV RECEIVER

Your new colour TV has many features and functions. Please look at the illustration below for guidance.



MAIN CONTROL PANEL
Push to open this door for access to the main control buttons.
See sections 3 and 4.

AERIAL INPUT / AV CONNECTION PANEL
For connecting the aerial cable and for AV connections (Eg. video recorders).
See section 17.

MANUAL TURN RELEASE LEVER
The TV can be turned manually to allow easy AV cable connection.
See section 17.

MINI-DOME SPEAKER GRILLE
The TV is equipped with 2 mini-dome speakers on the left and right for clear, powerful sound.
For STEREO reception, see section 14.

MAINS POWER SWITCH
After plugging in to the mains AC outlet, press to switch on.

HEADPHONE SOCKET
You can connect headphones to this set for private listening if desired.

INFRA-RED REMOTE CONTROL SENSOR
Point your remote control unit towards this sensor.

SUPERWOOFER SOUND PORT
Powerful bass sound from the built-in Superwoofer unit is directed through this sound port.
See section 13 for adjustment of the Superwoofer level.

ACCESSORIES

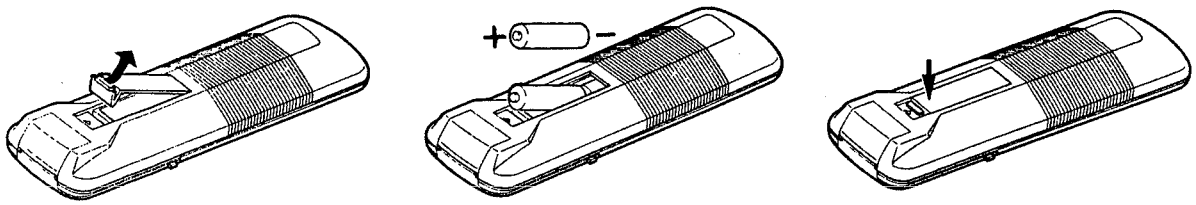
When you unpack the TV you should find:

1. Remote Control Unit
2. Two AAA-size Batteries
3. Operating Instructions (this booklet)
4. Cable retaining clip

THE REMOTE CONTROL UNIT

Your new TV is supplied with a combined TV and VCR remote control unit. See sections 5 and 6 for how to use it.

FITTING THE BATTERIES

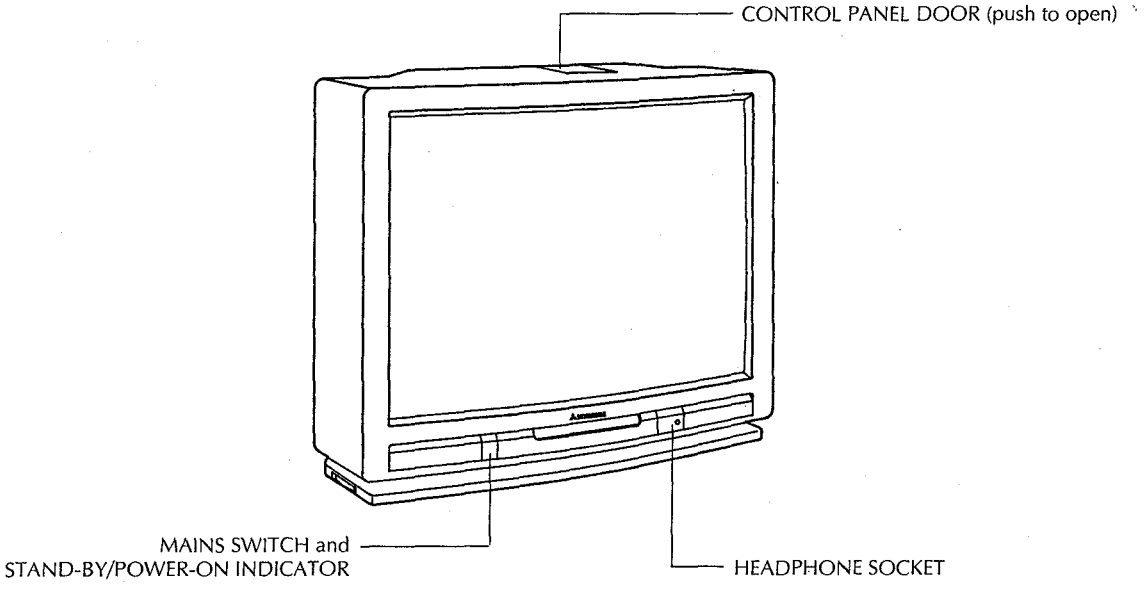


1. Remove the cover on the back of the remote control.
2. Insert the batteries, checking that the "+" and "-" marks on the batteries are the right way round.
3. Close the cover securely.

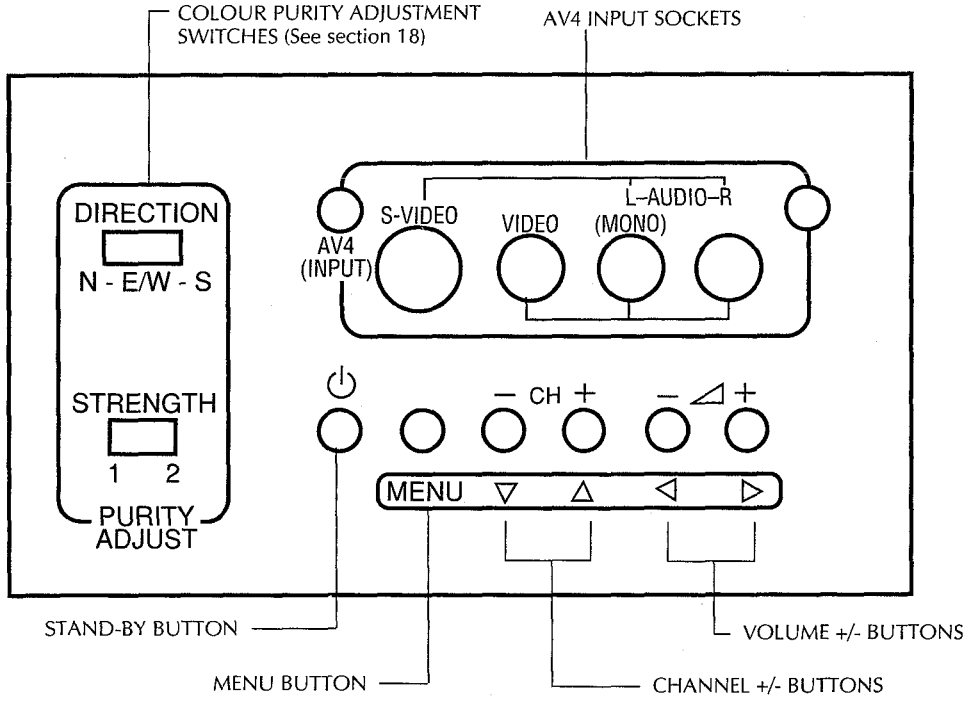
NOTE: 1. Do not use a new battery with an old one.

2. Do not cut open, short circuit, heat or throw batteries into a fire.

3 DIAGRAM OF THE TV CONTROLS



CONTROL PANEL



NOTE: After pressing the MENU button, the CHANNEL and VOLUME buttons control all the MENU functions.

4 OPERATION OF THE TV CONTROLS

1. MAINS SWITCH ⏻

Press to turn the TV on. The red STAND-BY indicator lights to show that mains power is on. If the green POWER-ON lamp does not light up as well, the set is in STAND-BY mode. Switch on by pressing the STAND-BY button, the green POWER-ON lamp lights up and the red lamp goes out.

2. STAND-BY BUTTON ⏻

Press this button to switch the receiver from POWER-ON to STAND-BY. Press again to switch back to POWER-ON. The green POWER-ON lamp is alight when the TV is fully switched on. The red STAND-BY lamp is alight only when the TV is in Stand-by mode.

3. CHANNEL +/- BUTTONS – CH +

Press the "+" or "-" button to change to the next higher or lower channel position number. These buttons are also used in "MENU" mode.

4. VOLUME +/- BUTTONS – 🔊 +

Press the "+" button to turn up the volume and the "-" button to reduce the volume. These buttons are also used in "MENU" mode.

5. MENU BUTTON

Pressing this button displays an on-screen menu for the adjustment of various functions. These are selected and adjusted using the VOLUME +/- and CHANNEL +/- buttons.

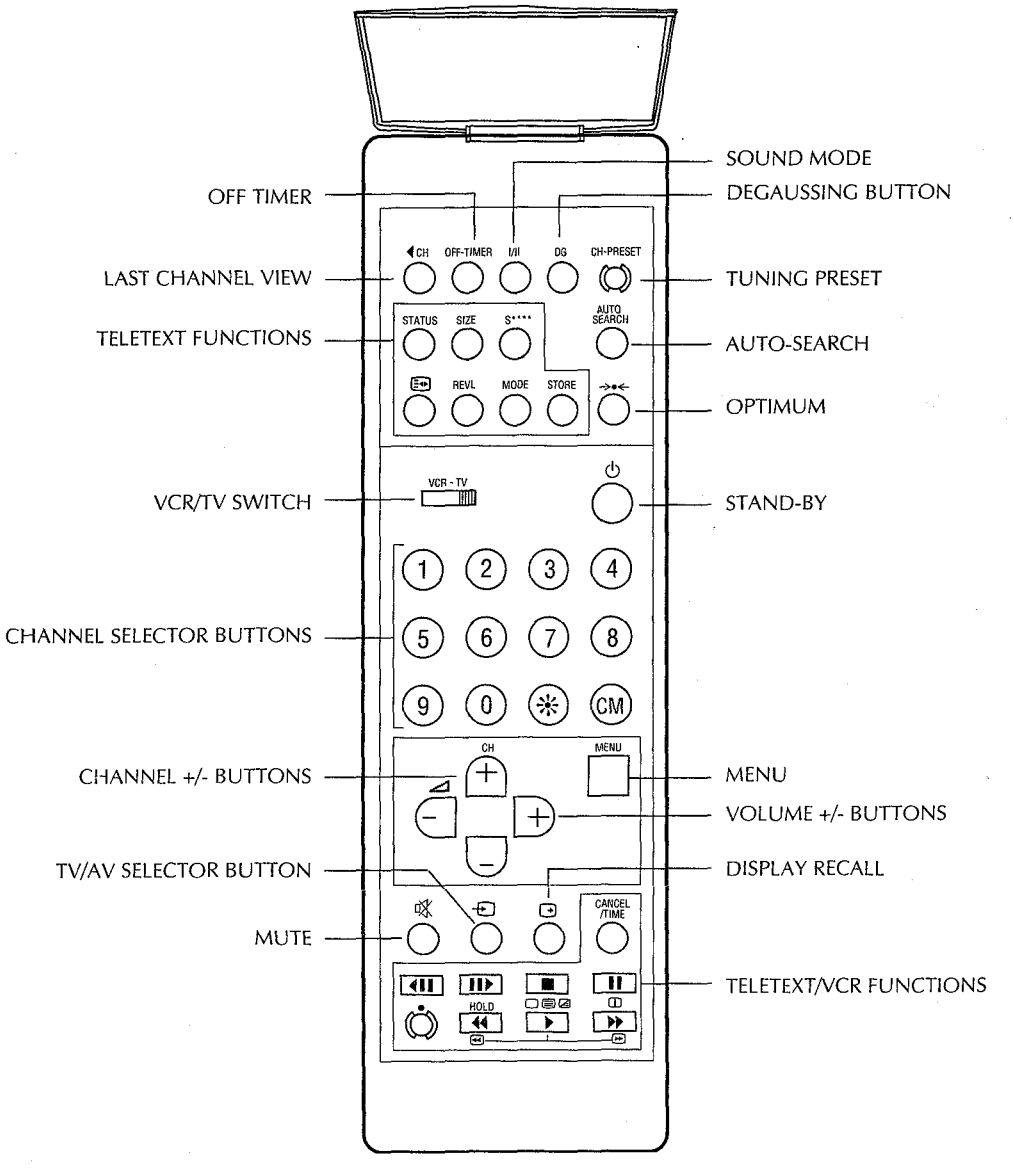
The functions are explained in sections 9 to 13 and 17.

6. HEADPHONE SOCKET 🎧

You can connect headphones to this set for private listening if desired. Push to open the AV4 input door for access to the 3,5mm stereo mini-jack socket. Inserting the headphone plug will switch off the loudspeakers.

IT IS ALWAYS ADVISABLE TO TURN OFF THE TV SET AT THE MAINS SWITCH IF IT IS TO BE LEFT UNUSED FOR LONG PERIODS OF TIME (Eg. holidays, etc.). It is also advisable to unplug the mains plug and disconnect the aerial at these times.

5 DIAGRAM OF THE REMOTE CONTROL



NOTE: The following buttons can control either the TV or a MITSUBISHI VCR depending on the position of the VCR/TV switch.

- STAND-BY
- CHANNEL SELECTOR BUTTONS (the "CM" button is for the TV only)
- CHANNEL +/- BUTTONS
- TELETEXT / VCR FUNCTION BUTTONS ("CANCEL/TIME" is for TV Teletext only)

For more details of the VCR functions please refer to the your VCR operating instructions.

6 OPERATION OF THE REMOTE CONTROL

Note: The MAINS SWITCH of the receiver must be in the "ON" position in order for the remote control to work.

1. VCR/TV SWITCH

Set to "VCR" to operate a MITSUBISHI VCR and "TV" to operate the TV.

2. STAND-BY ⏻

Press this button to switch the receiver from STAND-BY to POWER-ON. Press again to switch back to STAND-BY. The green POWER-ON lamp lights up when the TV is fully switched on. The red STAND-BY lamp is alight only when the TV is in Stand-by mode.

3. CHANNEL SELECTOR BUTTONS

Channel positions 0 — 9 can be selected directly by pressing one of the number buttons. For channel position numbers of 10 or higher, first press the "✱" button and then the two numbers. For example, to select channel position number 24 press ✱, 2 and 4 in that order.

If you know the real channel number, you can select the channel directly. First press the CM button and then press two buttons for the channel number. For example, to select channel 45 press CM, 4 and 5 in that order.

4. CHANNEL +/- CH +/–

Press "+" button to change to a higher channel position number, press the "-" button to change to a lower number. These buttons are also used in "MENU" mode.

5. VOLUME +/- ◿

Press the "+" button to turn up the volume and the "-" button to reduce it. These buttons are also used in "MENU" mode.

6. MENU

Pressing this button displays an on-screen menu for the adjustment of various functions. These are is selected and adjusted using the VOLUME +/- and CHANNEL +/- buttons.

The functions are explained in sections 9 to 13 and 17.

7. LAST CHANNEL VIEW ◀CH

Press to switch between the current channel position and the one last viewed.

8. OFF-TIMER

Used to program the TV to turn off automatically at a later time. See section 15.

9. SOUND MODE SELECT BUTTON I/II

Used to switch between the main channel "I" and the sub channel "II" during a dual-sound (bilingual) broadcast. Also used for selecting FORCED MONO during a stereo broadcast. See section 14.

10. DEGAUSSING BUTTON DG

Press to reduce unwanted colour impurities on the picture often caused by swivelling the set. See section 10.

11. TUNING PRESET BUTTON

Switches the TV to tuning mode - see section 7.

12. AUTO-SEARCH BUTTON

Used in tuning mode only - see section 7.

13. OPTIMUM →•←

Press to return to the factory preset levels for all picture and sound adjustments except volume. See section 11 for more information.

14. MUTE BUTTON

Press once to turn off the sound. The on-screen display will appear. Press again to restore the sound to its original level. Pressing the VOLUME "+" or "-" button will also restore the sound.

15. TV/AV SELECTOR BUTTON

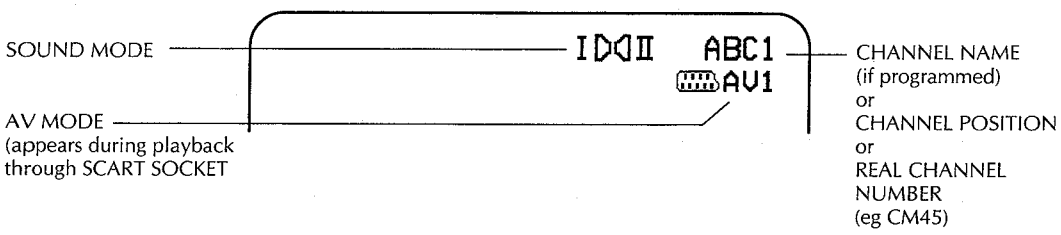
Press repeatedly to select either TV operation or the AV source to be viewed — TV, AV1, AV2, AV3 or AV4. The source you have chosen is indicated by an on-screen display which remains on the screen until a signal from the chosen source is fed to the receiver.

See section 17 for more details of the AV system operation and details of the AV connectors.

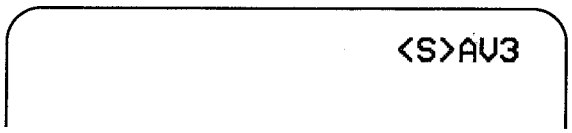
16. DISPLAY RECALL BUTTON

Press to display the channel information, sound mode and AV mode.

a) IN TV MODE



b) IN AV MODE



17. TELETEXT FUNCTION BUTTONS

See section 16.

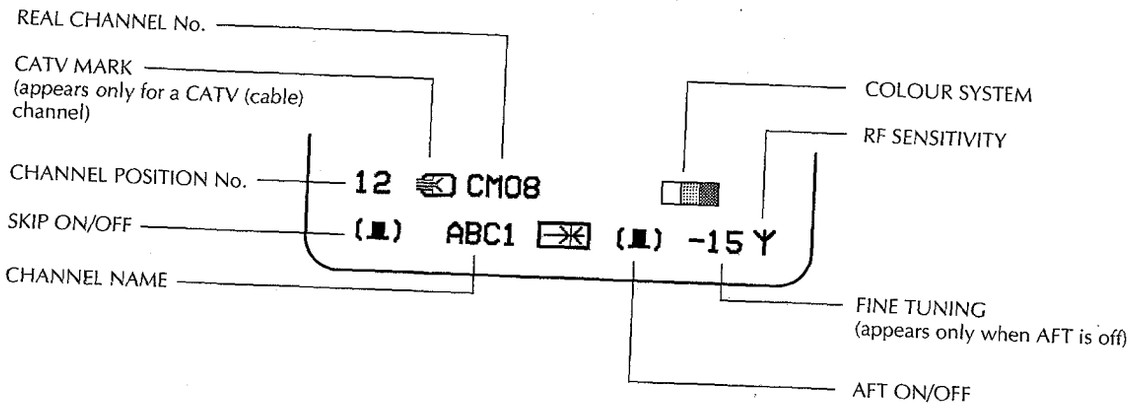
18. VCR FUNCTION BUTTONS

With the VCR/TV switch in the VCR position these buttons can be used to control most Mitsubishi VCRs. See your VCR operating instructions for more information.

7 CHANNEL PRESETTING

Channels may be pre-set (tuned-in) by either automatic-search tuning or manual channel number selection. Up to 60 channel positions can be memorized.

1. Press the CH-PRESET button. The on-screen display shows:



2. Select the item to be pre-set by pressing the VOLUME + or - button, the selected function will blink.

   a) CHANNEL POSITION NO.

      Select a channel position number using the CHANNEL +/- buttons or the CHANNEL SELECTOR buttons. For numbers 1 to 9 and 0, press the appropriate number button, for numbers 10 to 59, first press the "*" button and then the two numbers.

   b) REAL CHANNEL NO.

      i) DIRECT CHANNEL SELECTION

         If you know the real channel number of the station that you want - press the CM button and then press two numbers for the channel number. If the station required is on a CATV channel, press the CM button twice and then the channel number - see the channel tables at the end of this section.

      ii) AUTO-SEARCH TUNING

         If you do not know the real channel number, you can use automatic search tuning. Press the AUTO-SEARCH button, the automatic search will start tuning upwards from the channel number shown on the display and stop at the first station. If this is the one you want, simply go on to step c). If not, press the AUTO-SEARCH button again until the required station is found.

   c) COLOUR SYSTEM

      Set the colour system using the CHANNEL +/- buttons. There is a choice of AUTO , PAL, SECAM or 60PAL. In most cases you can use AUTO. Sometimes, however, it will be necessary to pre-set the system manually, for example in the case of a weak broadcast.

Note that 60PAL is only used for playing back an NTSC video tape (in a suitable VCR) through the aerial input - see also section 17.

d) SKIP ON/OFF

The SKIP function is used to tell the TV to skip over a channel when later changing channels using the CHANNEL +/- buttons.

Set the skip on ▬ or off ▙ using the CHANNEL +/- buttons.

e) CHANNEL NAME

Each channel position can be programmed with a name or code of up to 4 characters. The available characters are:

A,B,C,D.....X,Y,Z,0,1,2,3,....9, - (hyphen, used to make a blank space)

Select the character position using the VOLUME +/- buttons.

Select the character using the CHANNEL +/- buttons.

f) AFT ON/OFF and FINE TUNING

In normal use, fine tuning is not necessary as this TV has an automatic fine tuning system (AFT). Generally it is recommended to leave the AFT switched on. However, in the case of extreme interference or a weak signal, it may be desirable to operate the receiver with the AFT switched off and the fine tuning adjusted manually.

Switch the AFT on ▬ or off ▙ using the CHANNEL +/- buttons.

To fine tune manually (only possible with the AFT off)

i) Switch the AFT off ▙ as described above.

ii) Press the CHANNEL "+" or "-" button to adjust the tuning up or down. The number changes showing the tuning position relative to the normal setting.

g) RF SENSITIVITY

If you want the auto-search system to stop at weak broadcasts, set the RF SENSITIVITY to high. To skip over the weaker stations, set the sensitivity to low. Set the sensitivity to high Y or low Y using the CHANNEL +/- buttons.

3. When you have finished pre-setting all the stations that you need, press the CH-PRESET button to switch the tuning system off.

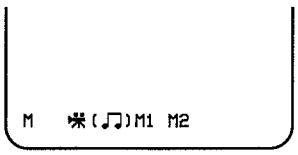
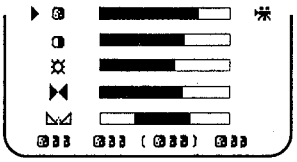
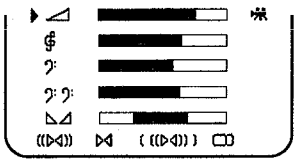
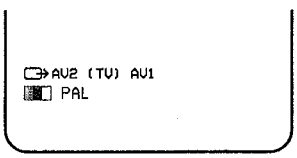
8 CHANNEL TABLES

These tables show the various channels available in most European countries. The channel number that you must enter using the CM button is shown in the column marked "on-screen channel no."

BROADCAST CHANNELS				CABLE TV CHANNELS			
Channel	**On-Screen channel no.**	**frequency (MHz)**	**Band**	**Channel**	**On-Screen Channel No.**	**Frequency (MHz)**	**Band**
Western Europe (CCIR)				**Western Europe**			
E2	02	48.25	VHF (I)	S1'	42	69.25	VHF (I)
E3	03	55.25		S2'	43	76.25	
E4	04	62.25		S3'	44	83.25	
E5	05	175.25	VHF (III)	S1 (M1)	1	105.25	VHF (III)
~	~	~(7MHz steps)~		~	~	~(7MHz steps)~	
E12	12	224.25		S10 (M10)	10	168.25	
E21	21	471.25	UHF (IV)	S11	11	231.25	
~	~	~(8MHz steps)~		~	~	~(7MHz steps)~	
E69	69	855.25		S20	20	294.25	
Italian Channels				S21	21	303.25	Hyperband
				~	~	~(8MHz steps)~	
H1	11	217.25	VHF (I, III)	S41	41	463.25	
H2	12	224.25					
A	13	53.75		H21	71 (=21+50)	303.25	
B	14	62.25		~	~	~(12MHz steps)~	
C	15	82.25		H41	91 (=41+50)	543.25	
D	16	175.25					
E	17	183.75					
F	18	192.25					
G	19	201.25					
H	20	210.25					

9 MENU FUNCTIONS

This TV provides an on-screen menu system for the operation of many of its functions. Each time the MENU button is pressed the on-screen display changes to show sub-menus of functions available for adjustment.

NUMBER OF TIMES PRESSED	ON-SCREEN DISPLAY	FUNCTIONS AVAILABLE FOR ADJUSTMENT
1		POWERED SWIVEL see section 10
2		AV MEMORY see section 11
3		PICTURE ADJUSTMENTS (Colour, contrast, brightness, sharpness, tint, colour temp.) see section 12
4		SOUND ADJUSTMENTS (Volume, treble, bass, super woofer, balance) see section 13
5		AV SYSTEM CONTROL see section 17
6	normal picture	

10 POWERED SWIVEL BASE

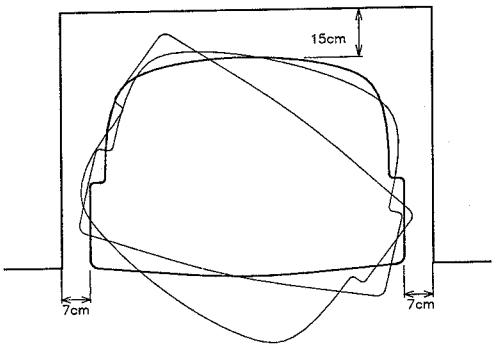
The POWERED SWIVEL BASE (or PSB) is an exclusive feature of this MITSUBISHI TV receiver. It allows you to swivel the TV by remote control to either the left or right within a 15° angle.

The feature has been found to be extremely useful in Japan where it was first introduced.

1. it offers a wider range of positions where the viewer can sit.
2. it gives the viewer a more balanced sound separation from all speaker units.
3. it can be used to reduce or remove unwanted reflections from the screen (e.g. room lights, sunlight, etc.).

POSITIONING THE TV

Position the TV receiver in a place where there is enough space for it to turn - as shown in the diagram:



NOTES:

1. ***DO NOT*** place the receiver on a slope, an uneven surface or a shag pile carpet or rug.
2. ***DO NOT*** put any object under the receiver.
3. ***DO NOT*** put objects in between the TV and its pedestal base.
4. ***DO*** allow enough length in all cables connected to the TV so that they are not stretched or kinked when the TV is swivelling.

TURNING THE TV

1. Press the MENU button on the TV or the remote control. The POWERED SWIVEL display will appear on the screen:

2. Press the VOLUME "-" or "+" button to turn the TV to the left or right.
3. Press the MENU button until the display disappears or press the DISPLAY RECALL button.

NOTE: the display will automatically disappear after 15 seconds if no buttons are pressed.

WARNING

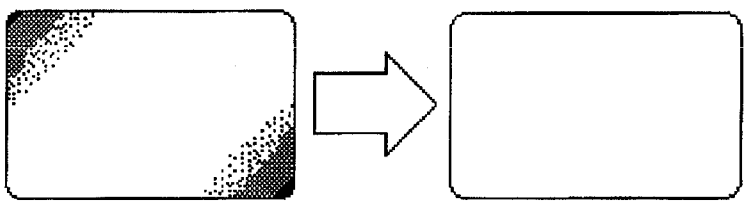
1. ***DO NOT*** put fingers or other objects between the TV and its pedestal base, especially while the set is turning. This may hurt the fingers or damage the objects as well as damaging the TV.
2. ***DO NOT*** turn the TV while any heavy object is placed on it.
3. ***NEVER*** lean or sit on the TV at any time, ESPECIALLY when it is turning.
4. ***DO NOT*** use the POWERED SWIVEL function continuously. The TV has not been designed for such use.

HOW AND WHEN TO USE THE DEGAUSSING FUNCTION

A TV picture is easily affected by the magnetic force of the earth (geomagnetism) which exists everywhere but in different strengths depending on latitude. In some areas, where this geomagnetic interference is strong, the TV picture may show some "colour impurity" — this appears as a coloured smudge in the corners of the picture usually when the POWERED SWIVEL function is used.

When this happens, a treatment called DEGAUSSING (de-magnetizing of the TV picture tube) will be necessary. The DEGAUSSING procedure is quite simple:

Press the DEGAUSSING button, marked DG, on the remote control unit. The picture will disappear for about 10 seconds. When it returns, in most cases the colour impurity will have been removed. However, sometimes it may only have been reduced. In this case, leave the set as it is for a few minutes and try again.



BEFORE DEGAUSSING AFTER DEGAUSSING

The degaussing function can be used twice in a row at any one time. If the DEGAUSSING button is pressed repeatedly, the effectiveness of the degaussing system will decrease and will have to be left for about 10 minutes to regain full effectiveness.

11 AV MEMORY

This TV has four "AV memories". These are pre-set picture and sound adjustments suitable for different types of programmes. There are two factory settings and two others that you can use to memorize your own preferred adjustments. You can change or replace these as much as you like.

Note that the volume level cannot be memorised separately for each AV memory.

The four memories are:

MOVIE — soft picture and strong sound

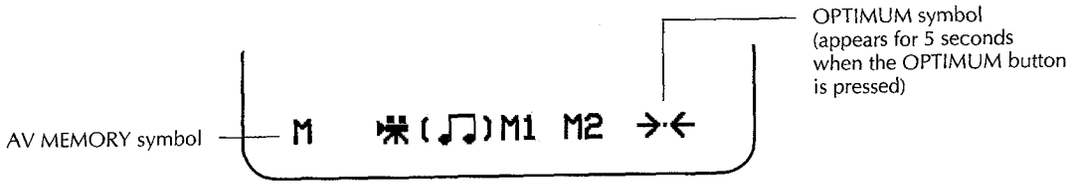
MUSIC — clear and lively picture and sound

M1 and M2 — available for your own settings - see the following sections for details of sound and picture adjustments.

FUNCTION	SETTINGS		
	FILM	MUSIC	M1 / M2
COLOUR	■■■■■	■■■■■■■	■■■■■■■
CONTRAST	■■■	■■■■■	■■■■■■■
BRIGHTNESS	■■■■■■■■■	■■■■■■■	■■■■■■■
SHARPNESS	■■■■■■■	■■■■■■■	■■■■■■■
TINT	■■■■■■■	■■■■■■■	■■■■■■■
COLOUR TEMPERATURE	MIDDLE	MIDDLE	MIDDLE
TREBLE	■■■■■■■	■■■■■■■■■■■■■	■■■■■■■
BASS	■■■■■■■■■■■■■	■■■■■■■■■■■■■	■■■■■■■
SUPER WOOFER	■■■■■■■■■■■■■	■■■■■■■■■■■■■	■■■■■■■
BALANCE	■■■■■■■	■■■■■■■	■■■■■■■
SOUND EFFECT	⋈	⋈	⋈

TO SELECT AN AV MEMORY

1. Press the MENU button twice, the AV memory selection display will appear on the screen.



2. Select the desired AV memory using the VOLUME +/- buttons.
3. Press the MENU button until the display disappears or press the DISPLAY RECALL button.

NOTE: the display will automatically disappear after 15 seconds if no buttons are pressed.

OPTIMUM →•←

To reset an AV memory to the factory setting:

Press the OPTIMUM button to reset all of the picture and sound functions (except volume) to the factory preset levels.

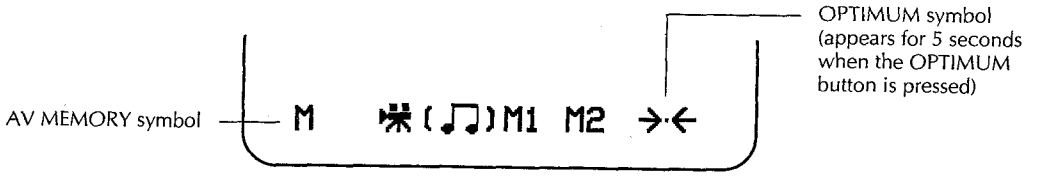
If you press the button when any one of the picture or sound functions is on the screen, only the displayed function is reset.

Note that the VOLUME level is not affected by this button.

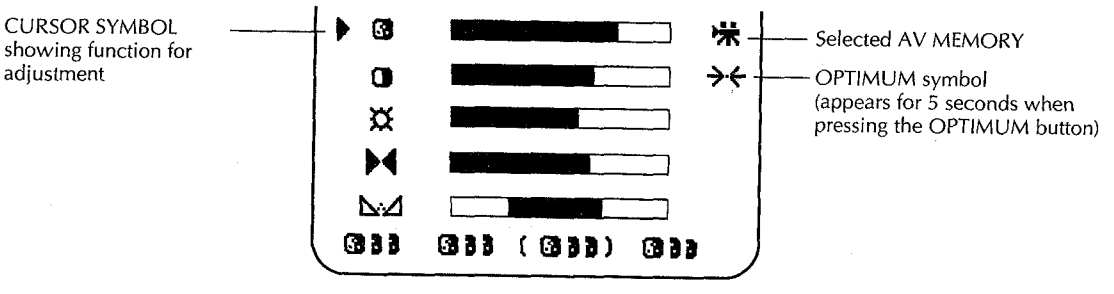
12 PICTURE ADJUSTMENTS

Picture adjustments are made using the MENU, CHANNEL +/- and VOLUME +/- buttons.

1. Press the MENU button twice, the AV memory selection display will appear on the screen:



2. Select one of the AV memories using the VOLUME +/- buttons, then press the MENU button again. The picture function display will appear:



3. Press the CHANNEL "-" or "+" button to move the cursor down or up and so select the picture function to be adjusted:

COLOUR

Adjust the strength of the colours by pressing the VOLUME "+" button to make them stronger or the "-" button to make them weaker.

NOTE: colour adjustment is not possible in TELETEXT mode or when using the RGB input of the AV1 connector.

CONTRAST

Press the VOLUME "+" button to increase the contrast and the "-" button to reduce it. The contrast setting should be adjusted to suit the brightness of your surroundings. A bright room will need a higher contrast setting than a darkened room.

BRIGHTNESS

Use the VOLUME "+" AND "-" buttons to adjust the picture so that the black parts of the picture are only just black. That is, you should be able to see detail in the dark areas but the black parts should be black and not gray. You should not need to adjust the BRIGHTNESS control very often. Use the CONTRAST control to compensate for room lighting as described above.

SHARPNESS

This is used to change how sharp the picture looks. It is of most use when watching programmes from an external source such as a VCR. Pressing the VOLUME "+" button makes the picture seem sharper, pressing the "-" button makes the picture softer.

NOTE: sharpness adjustment is not possible in TELETEXT mode or when using the RGB input of the AV-1 connector.

TINT **(this function is only available when watching an NTSC programme through an AV input)**

Press the VOLUME "+" button and "-" buttons to adjust the tint of the picture. Use skin colours to judge when the setting is correct.

COLOUR TEMPERATURE

This feature allows you to change the picture to a slightly warmer or slightly cooler tone, that is slightly red or slightly blue. Press the VOLUME "+" or "-" button to adjust the setting. The chosen setting is shown by brackets ( ).

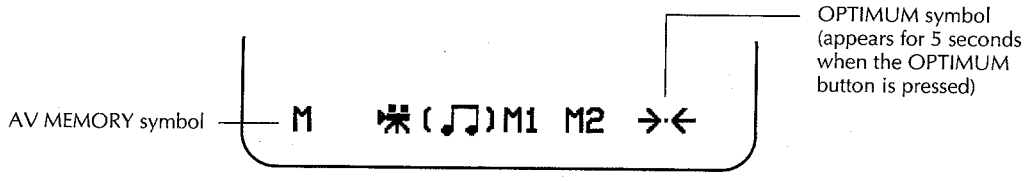
4. When you are finished, press the MENU button until the display disappears or press the DISPLAY RECALL button.

NOTE: the display will automatically disappear after 15 seconds if no buttons are pressed.

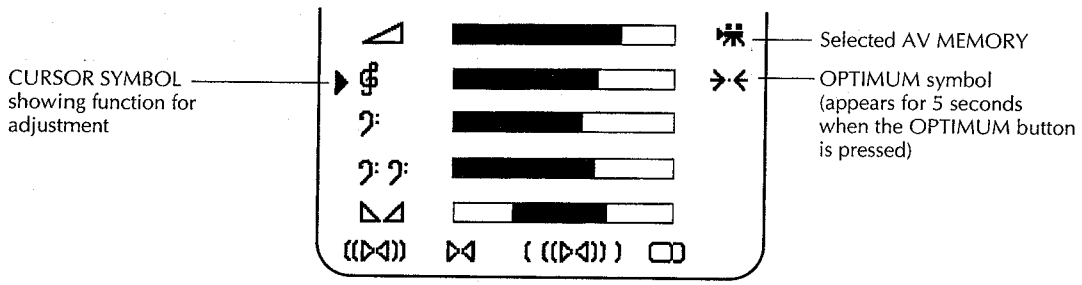
13 SOUND ADJUSTMENTS

Sound adjustments are made using the MENU, CHANNEL +/- and VOLUME +/- buttons.

1. Press the MENU button twice, the AV memory selection display will appear on the screen:



2. Select one of the AV memories using the VOLUME +/- buttons, then press the MENU button twice. The audio function display will appear:



3. Press the CHANNEL "-" or "+" button to move the cursor down or up and so changes the audio function available for adjustment:

VOLUME

Press the VOLUME "+" or "-" button to increase or decrease the volume.

TREBLE

Adjust the level of high-frequency sounds by pressing the VOLUME "+" button to increase them or the "-" button to reduce them.

BASS

Adjust the volume of low-frequency sounds by pressing the VOLUME "+" button to increase them or the "-" button to reduce them.

SUPER WOOFER

This is used to change the volume of the extra-low frequency sound from the super woofer unit. Press the VOLUME "+" or "-" button to adjust the level as desired.

BALANCE

Press the VOLUME "-" button to increase the volume from the left loudspeaker. Press the "+" button to increase the volume from the right.

SOUND EFFECT

There is a choice three sound effects:

..normal, ie. no effect,

...wide sound, an effect that makes stereo sound seem wider,

...pseudo-stereo, this creates the impression of stereo sound from a mono source.

4. When you are finished, press the MENU button until the display disappears or press the DISPLAY RECALL button.

NOTE: the display will automatically disappear after 15 seconds if no buttons are pressed.

14 STEREO BROADCAST RECEPTION

This TV is capable of dual-carrier stereo sound reception. When a programme is received for the first time, an on-screen display appears showing the sound mode being received.

1. STEREO RECEPTION

During a stereo broadcast you can select "forced mono" by pressing the SOUND MODE button "I/II". This can be used to reduce the level of background noise or to stop the TV from switching in and out of stereo if the aerial signal is weak or if there is interference.

The on-screen display of the selected sound mode is:

= STEREO = FORCED MONO

2. DUAL SOUND (BI-LINGUAL) RECEPTION

During a dual-sound (bi-lingual) broadcast pressing the I/II button repeatedly selects the following options:

a) channel I on both speakers I I

b) channel II on both speakers II II

c) channel I on left speaker, II on right speaker I II

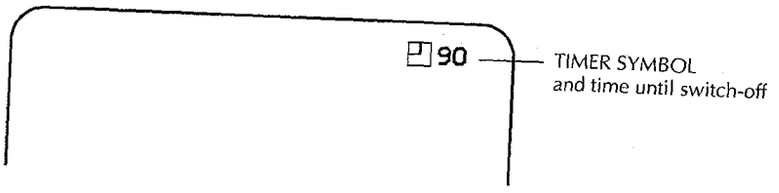
Note that if the broadcast sound mode changes (from stereo to bi-lingual, for example) the screen will display the symbol of the new sound mode for a few seconds.

15 OFF-TIMER OPERATION

This set has two off-timers. One is the sleep timer which automatically switches the TV to "stand-by" 30 minutes after the transmitter shuts down. The other timer can be programmed to switch off the TV up to 90 minutes in advance.

PROGRAMMING THE OFF-TIMER

1. Press the OFF-TIMER button once, the on-screen display shows:



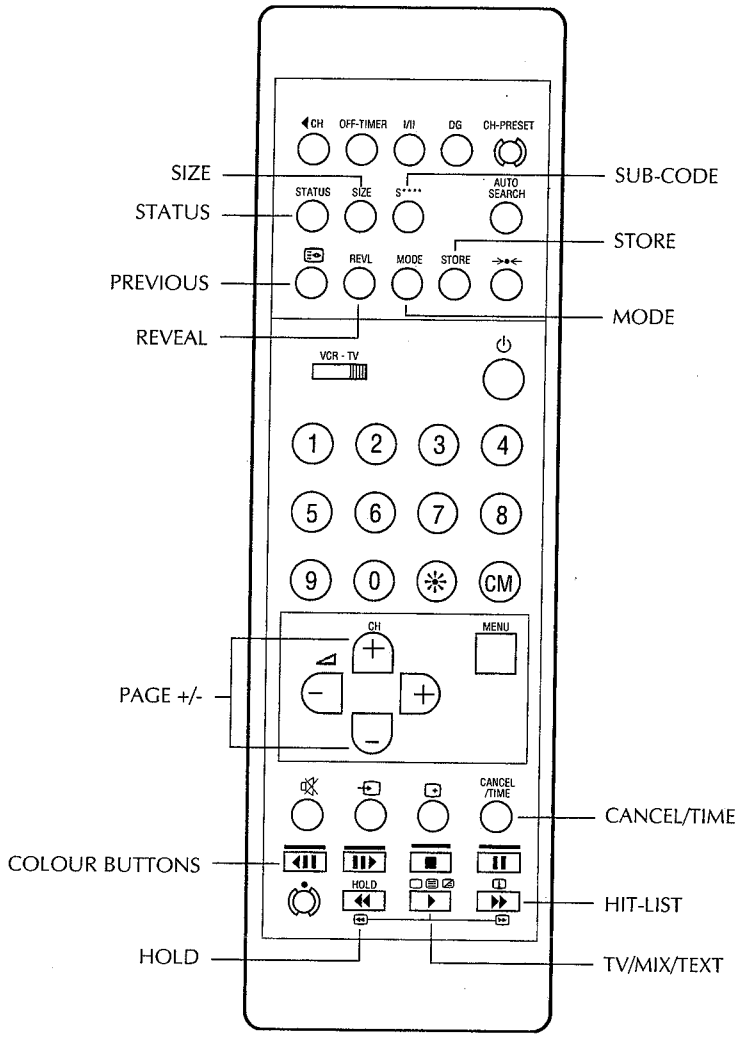
2. Press the OFF-TIMER button again and the number "90" appears next to the timer symbol. This is the time in minutes remaining until the TV switches itself to stand-by.
3. You can reduce this time in 10 minute steps by pressing the OFF-TIMER button again to display 80 minutes, then 70 minutes and so on until you see the time you want.
4. When the timer display disappears, the timer is set.

   At one minute before the switch-off time, the timer display appears on the screen in red.

   To cancel the timer, press the OFF-TIMER button repeatedly until the remaining time is zero, shown by --.

   To check the remaining time, press the OFF-TIMER button once when there is no timer display on the screen.

16 TELETEXT OPERATION



This television is fitted with a "Table of Pages" - TOP - teletext system. The TOP teletext broadcast arranges the pages logically into Blocks and Groups. Blocks are main subject headings such as SPORT, NEWS etc. and Groups are areas within these subjects such as TENNIS, FOOTBALL, etc.

When teletext mode is first selected you may have to wait for up to 60 seconds for the broadcaster to transmit the index information page. This tells the system the titles of the blocks and groups and which page numbers are available. While you are waiting a message is displayed: "TOP AUFFRISCHUNG, BITTE WARTEN" (Top updating, please wait). When the system is ready an index page is displayed. Note that a similar update happens when you change channel or change back from LIST mode to TOP mode (see later).

If TOP style teletext is not being broadcast, you will still have to wait for 1 minute to allow the teletext system to discover this. It will then set itself into normal teletext mode and an index page will be displayed. This will have a "T" to the left of 4 coloured numbers at the bottom of the page.

1. TV/TEXT/MIX button

Switch to teletext mode by pressing this button. Press again to superimpose the Teletext page on the TV picture ("MIX" mode). Press the button again to switch back to TV mode.

2. COLOUR buttons

In TOP teletext mode, the bottom line of the display is :

<<	>>	Title of next Group	Title of next Block
(red)	**(green)**	**(yellow)**	**(blue)**

The << and >> symbols mean "next available page back" and "next available page forward" respectively. To select any of these options, press the corresponding coloured button on the remote control. Note that the main index page is a Block page and can be found quickly by pressing the blue button until the number at the top left is "100". Alternatively press 1,0,0 using the number buttons

3. NUMBER buttons

The number buttons 0 - 9 can be used to select a page by pressing the 3 numbers in sequence. In TOP mode, if the page is not available, the following message is displayed: "SEITE XXX WIRD NICHT GESENDET" (Page XXX is not being broadcast).

4. HIT LIST

The TOP system allows the broadcaster to choose certain pages to be put on a separate index. This index is selected using the HIT-LIST button . There is a blue cursor which highlights a page title in the index. Move this cursor using the << or >> colour buttons and select the highlighted page using the colour button matching the colour of "ANWAHL" (Select).

5. PREVIOUS

The PREVIOUS function can be used to look back at the last four selected pages.

6. PAGE UP/DOWN CH +/–

In TOP mode, these buttons have the same function as the << and >> colour buttons. In Normal mode, they select the next page number forward or backward.

7. SIZE

This function can be used to display the text information in double height characters. Pressing the SIZE button repeatedly will display the top half of the page in double height characters, then the bottom half the same way, and then the full teletext page in normal height characters.

8. HOLD

Some teletext pages contain several subpages which are automatically displayed in sequence. If you wish to keep one such subpage displayed press the HOLD button. The symbol will appear at the top left of the page and the currently displayed subpage will not change. To release this function press the HOLD button again or select another page.

9. REVEAL REVL

Some pages contain hidden text, for example a quiz page with concealed answers. Pressing the REVL button displays this text until the button is pressed again.

10. TEXT CANCEL CANCEL

The CANCEL button restores the television picture but leaves the TV in Teletext mode. You can request pages and perform other Teletext operations without interrupting a television programme. When the teletext system is put into cancel mode, the page header (top line) is displayed when a) a page is received for the first time, b) the requested page contains a newsflash or subtitle, or c) a requested alarm page is received .

11. MODE

The MODE button is used to change between TOP (or Normal) and LIST Teletext modes. In LIST mode the letter "L" can be seen at the left of 4 coloured numbers at the bottom of the page. These numbers can be replaced by those of your favourite pages and selected using the colour buttons. See the next paragraph - "STORE" for details.

12. STORE

To pre-set a page number in LIST mode (see previous paragraph - MODE), first press a colour button, then select the required page. Repeat this with the other colour buttons as desired. Then press the STORE button and hold it until the four numbers flash white. These numbers are now in the permanent memory of the Teletext system. To change these numbers, repeat the above procedure. You can store 41 sets of four page numbers on each of the first 41 channel positions (0 to 40). The other channel positions share a single set of four page numbers.

13. SUB CODE S✳✳✳✳

The sub code command can be used in two ways:-

a) If a teletext page has several subpages and you would like to see one particular subpage, first select the page number. Next press the S✳✳✳✳ button, "✳✳✳✳" will be displayed in place of the page number. Now enter the desired subpage number using the number buttons 0 - 9, e.g. for page 2/7 (2 of 7) enter "0002". The displayed page will not change until the required page and subpage are found.

b) Teletext may be used to provide a visual alarm by displaying a suitable message at a preset time (if this facility is being broadcast). Select the appropriate page and then press the S✳✳✳✳ button. Now enter the time using the number buttons (24 hour clock) and then press the CANCEL button. This will restore the television picture. When the preset time arrives, the alarm message will appear.

To switch off the sub-code function press the S✳✳✳✳ button twice or simply select a new page.

14. STATUS

Sometimes the top line of the teletext page is not visible, for example, when teletext is showing subtitles. To display the top line, press the STATUS button.

15. TIME DISPLAY

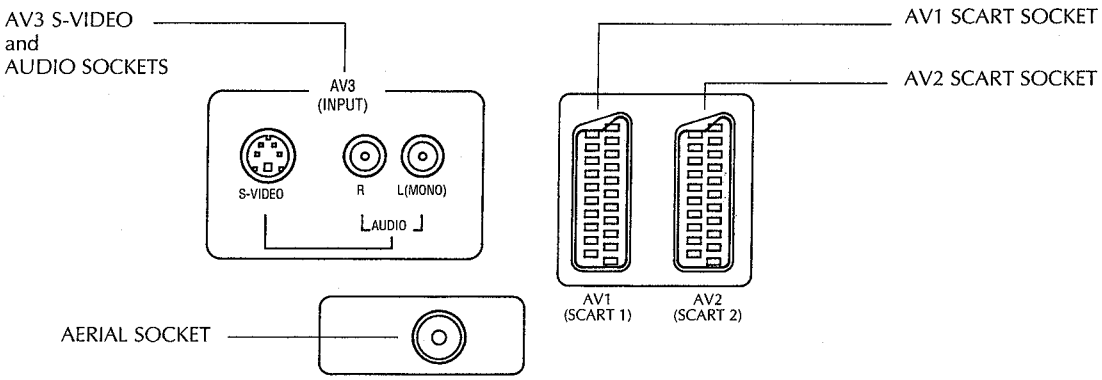
The digital clock visible at the top right of the Teletext page can be called-up from TV mode by pressing the TIME button. The display disappears after a few seconds.

17 CONNECTORS

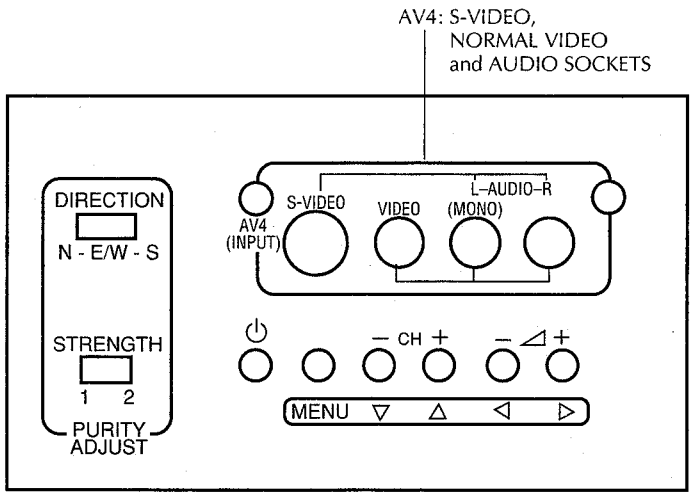
Pull forward the release lever located on the left side of the powered swivel base . You can now manually turn the receiver to the right or left by up to 120°. This will make the connector panel more easily accessible.

When the receiver is turned beyond 17°, the power is turned off automatically to prevent colour impurities caused by the earth's magnetic field. The receiver cannot be turned on by the STAND-BY button on the remote control. After making the connections, return the TV to its normal position and switch on by pressing the STAND-BY button. If necessary, degauss the TV as explained in section 10.

REAR PANEL



CONTROL PANEL



HEADPHONE SOCKET

You can connect headphones to this set for private listening if desired. Push to open the AV4 INPUT door on the front of the set for access to the 3,5mm stereo mini-jack socket marked . Inserting the headphone plug will switch off the loudspeakers.

AERIAL

The aerial socket on the back is a standard 75 ohm coaxial TV aerial socket. Connect your aerial in the usual way.

You can also use the aerial socket to connect a VCR, home computer or etc. but it is recommended that you use one of the following sockets as these should give a better quality result.

AV1 SCART SOCKET

This is the main input and output socket. It has audio, composite video and RGB inputs (collectively called "AV1-in") and audio and composite video outputs (collectively called "AV1-out"). The output is always the same as the signal received though the aerial socket (the "TV signal") even when you are watching an AV input.

AV2 SCART SOCKET

This connector provides a second audio and composite video input (AV2-in) and a second audio and composite video output (AV2-out). This output can be switched between either the AV1 input or the TV signal using the MENU, CHANNEL +/- and VOLUME +/- buttons, see "AV SYSTEM CONTROL" below for details.

AV3 INPUT (S-VIDEO INPUT)

There are three sockets - an S-video input and two audio inputs (right and left). Connect the "S" (Separated Y/C) video output of an S-VHS VCR or other such equipment to the S-VIDEO input socket. Connect the right and left audio outputs to the corresponding AUDIO input sockets.

Note that if the audio output of your external video equipment is mono, make sure that you connect the audio plug to the "L(MONO)" socket so that the signal is automatically sent to both the left and right TV speakers.

AV4 INPUT (standard or S-VIDEO inputs)

This input is behind the right hand door on the front of the TV. There are four sockets: 1) an S-video socket for connecting a super VHS VCR or similar; 2) two audio inputs - stereo left and right; and 3) a composite video socket (RCA phono type) for a conventional VCR.

NOTE: if you try to connect both the S-video socket and the standard socket at the same time, the TV will use the signal from S-video input in preference to the standard input.

Note that if the audio output of your external video equipment is mono, make sure that you connect the audio plug to the "L(MONO)" socket so that the signal is automatically sent to both the left and right TV speakers.

AV INPUT SELECTION

Press the TV/AV SELECTOR button on the remote control, the on-screen display shows:

Pressing the TV/AV SELECTOR button repeatedly changes the selected input, and the on-screen display, in the following order:

TV → AV1 → AV2 → <S>AV3 → AV4 → TV etc.

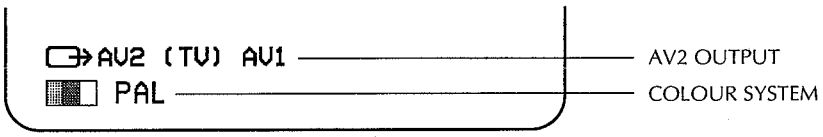
If you have connected equipment to the AV1 or AV2 SCART socket with a SCART to SCART connecting lead, you can usually expect the equipment to switch the TV into AV mode automatically as soon as the equipment is set to play. In this case the on-screen display of "AV1" or "AV2" will be replaced by " AV1" or " AV2".

If you have connected S-Video type equipment to the AV4 input - the on-screen display will show "<S>AV4" in place of simply "AV4".

AV SYSTEM CONTROL

The AV inputs and outputs are controlled using the MENU, CHANNEL +/- and VOLUME buttons.

1. Press the MENU button five times, the AV system display will appear on the screen:



2. Press the CHANNEL "+" or "-" button to switch between the options.

   a) AV2 OUTPUT

   There are two AV outputs available on this receiver, one on each SCART socket. The AV1 output is always the same as the signal received through the aerial socket (the TV signal). The AV2 output can be switched between the TV signal and AV1 input signal.

   Select the AV2 output using the VOLUME +/- buttons.

   b) COLOUR SYSTEM

   Select the colour system using the VOLUME +/- buttons. The colour system can be set to AUTO , PAL, SECAM or 60PAL in TV mode (for aerial input) and to AUTO , PAL, SECAM, NTSC 358, NTSC 443 or 60PAL in AV mode.

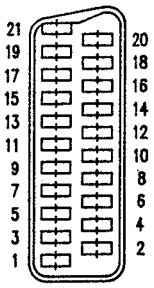
   Normally you can set this to AUTO . However, you should select 60PAL and NTSC 443 manually when using equipment of these standards.

   Note that any adjustment of the colour system will be lost when you return to TV mode and change channel.

3. When you are finished press the MENU button until the on-screen display disappears.

NOTE: The display will automatically disappear after 15 seconds if no buttons are pressed.

SCART SOCKET CONNECTIONS



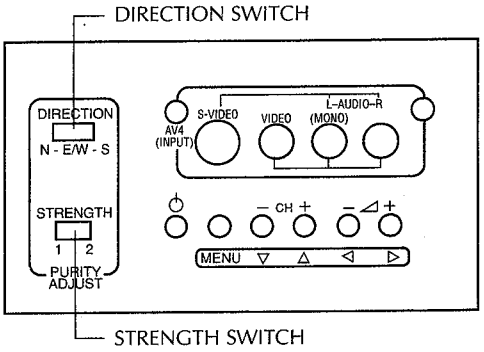
PIN	AV1	AV2	PIN	AV1	AV2
1	AUDIO OUT R		12	NOT CONNECTED	
2	AUDIO IN R		13	RED EARTH	NOT CONNECTED
3	AUDIO OUT L		14	BLANKING EARTH	NOT CONNECTED
4	AUDIO EARTH		15	RED IN	NOT CONNECTED
5	BLUE EARTH	NOT CONNECTED	16	BLANKING	NOT CONNECTED
6	AUDIO IN L		17	VIDEO OUT EARTH	
7	BLUE IN	NOT CONNECTED	18	VIDEO IN EARTH	
8	FUNCTION SWITCH		19	VIDEO OUT	
9	GREEN EARTH	NOT CONNECTED	20	VIDEO IN	
10	NOT CONNECTED		21	SOCKET EARTH	
11	GREEN IN	NOT CONNECTED			

18 PURITY ADJUSTMENT

Your MITSUBISHI colour TV has a large screen picture tube which can be affected by the earth's magnetic field. This appears as dark or coloured patches in the corners of the screen.

To avoid this problem, make the following adjustments:

1. Switch off the TV.
2. Position the TV as required.
3. Make sure the TV is centred on its powered swivel base.
4. Find out which way the TV is facing (north, west or etc.) if possible.
5. Switch on the TV.
6. Set the STRENGTH switch to "1".
7. Set the DIRECTION switch according to the table. (If you do not know which direction the TV is facing, try all three positions in turn)
8. Check the picture, use a test card if possible - if not, try to use a medium bright picture with large areas of plain colour.
9. If there is still a problem, try the STRENGTH switch in position "2".



TV direction	Switch Setting
North, North-East North-West	N
South, South-East South-West	S
East, West	E/W

Note:

A) You must make this adjustment every time the TV is moved (position OR direction) except for normal powered swivel base operation.

B) Do not place any metal or magnetic items, such as separate loudspeakers, close to the TV.

C) If you still have a problem, ask your MITSUBISHI dealer for help.